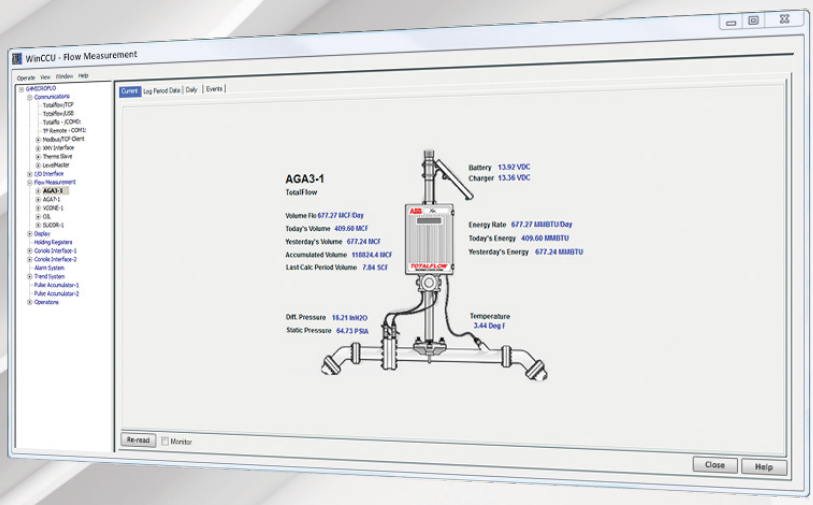
ABB MEASUREMENT & ANALYTICS | DATA SHEET

WinCCU Database files

System software products



Description

Totalflow applications use several databases and file formats for storing data and configuration information. These include Microsoft SQL Server, Microsoft Access, and a binary file format for Gas Flow data.

Features

Totalflow WinCCU Software is structured around flexible data and configuration storage.

- Historical / Audit Trail Gas Flow and Analysis Data
  - Archive File Format
  - Long Term Database Tables
- Configuration Data
- Trend Data

Archive file

Audit trail data is collected from a Flow Computer or an analyzer, organized, and stored into the Archive file. Data in this file is kept unchanged in a Totalflow proprietary binary file format. Data can be stored into this file, but cannot be altered once it is there. Totalflow does not publish the format of this file, but does provide various ways of extracting data, including:

- Converting the data into long term database tables
- Preparing Reports and standard file outputs
- Send e-mail reports
- Using the Totalflow Archival Interface (TAI)
- Toolkit Programming Interface to programmatically read data from this file for custom applications
- Export to a file in the Totalflow Universal (XML) Import format
- Verifying the integrity of the file

Data can be added to this file through the normal WinCCU collect, or imported using the Totalflow Universal Import Format.

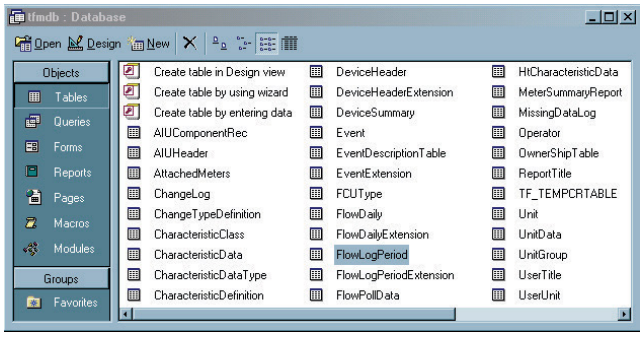
The Import Format is designed to allow for flow computer data coming from sources other than Totalflow Flow Computers to be imported into the WinCCU Archive file. Once in the Archive file, the data is available for all of the same functions as Totalflow data. This capability is intended to allow importing flow computer data from charts or non-Totalflow Flow Computers into the Archive file.
The system also maintains an Event Log as part of the Audit Trail Data. This log records any changes made to the configuration of the device, so that volume calculations can be reproduced. This log is part of the Archive File.

Long term database

The Long Term Database is the working storage for Audit Trail data. Data is converted from the Archive File into the Long Term Database Tables for editing and subsequent processing. Although WinCCU provides reporting of Archive data, most users prefer to edit their data first to correct the entries – e.g., failure to enter an orifice change, Analysis data update. The corrected data is then exported to other systems, trended on the screen, or included in a report.

Edits made in the data are recorded in the event log. The Audit Trail can be verified by reprocessing the Archive File data with the Event Log changes. The result will be the current Long Term Database.

WinCCU supports Microsoft SQL Server and Microsoft Access Databases for its Long Term database.
The following Microsoft Access database screen shows the range of tables required.



Configuration database

Device configuration data is used primarily for polling devices. The data in this database specifies baud rate, link establishment time, parity, communication media, type of device, various delays, I/O port used, location of the I/O port, and other communication considerations. The Configuration database can be in Microsoft SQL Server or Microsoft Access.

Trend database

The Totalflow devices have the capability to collect and store trend data. The trend application is very flexible, allowing multiple trends to be stored simultaneously. These trends can have different time bases, be triggered by different events, or simply be data from other applications running in the device. WinCCU will collect the trend files and import them into access or SQL databases. The imported data is appended to existing data without duplicating existing data. The Trend database can be in Microsoft SQL Server or Microsoft Access.

Benefits

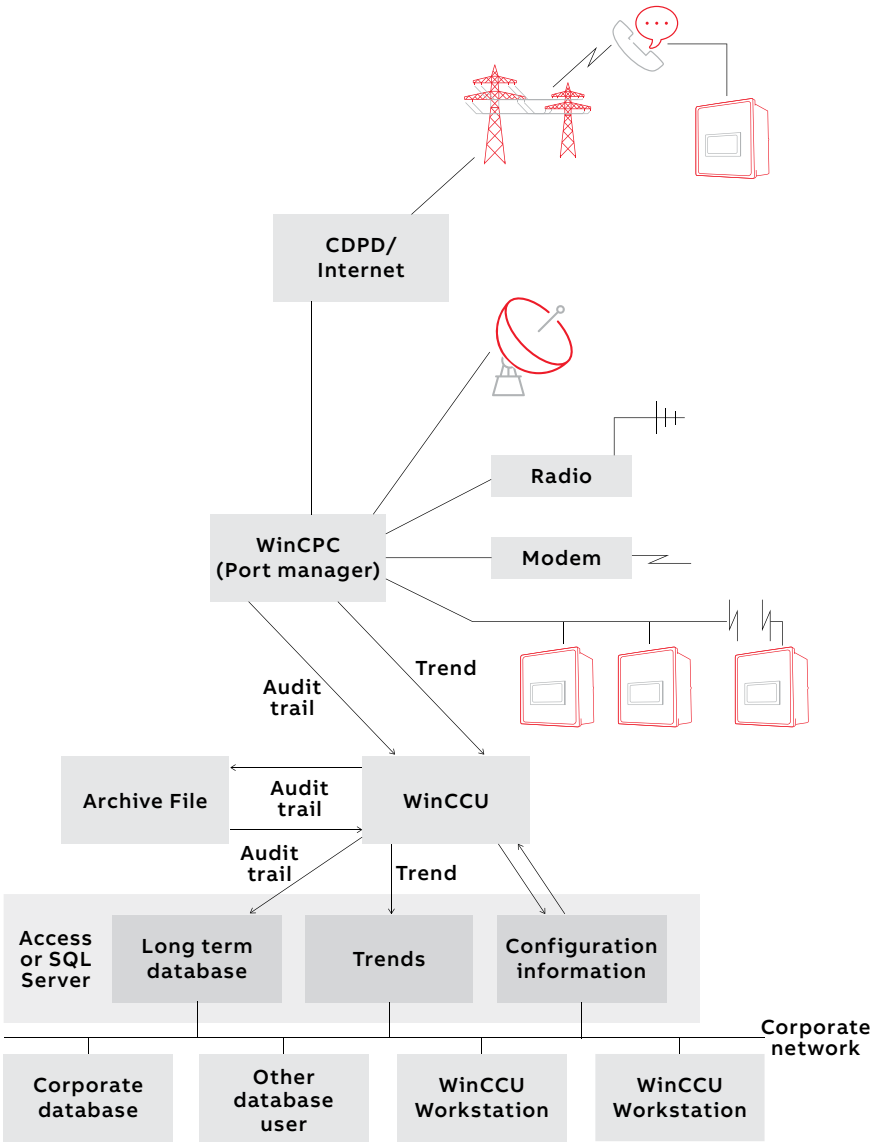
These databases provide security for the data and flexibility for the user. The Archive file preserves the original data for the Audit Trail. Backing up this file regularly will insure that this Audit Trail can be reproduced if necessary.

The Long Term, Configuration, and Trend databases can be stored in either the Microsoft Access or SQL Server databases. Access provides a low cost for single user systems and can often be used for multiple user systems. SQL Server is a high per-formance multi-user database capable of providing for corporate wide needs. Users choose which option best suits their needs.

Both Access and SQL Server data can be accessed with standard SQL statements. This allows data to be transferred to corporate databases such as Accounting, Engineering, or Marketing for further processing.

Other Applications such as well analysis packages can also access this data thru SQL statements.

The database design improves the maintainability of the data and the supporting software. This improves the reliability of the system.



Castel Maggiore (BO) 40013
Via Lirone 60/i

e-mail: info@eurotecsrl.com
Tel: +39 051/6321595
Website: www.eurotecsrl.com

C.F.: 04103780377
P.I.: 01596581205

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ABB Inc.
Measurement & Analytics
Quotes: totalflow.inquiry@us.abb.com
Orders: totalflow.order@us.abb.com
Training: totalflow.training@us.abb.com
Support: totalflowsupport@us.abb.com
+1 800 442 3097 (opt. 2)

Main Office
7051 Industrial Boulevard
Bartlesville, OK 74006
Ph: +1 918 338 4888

Kansas Office
2705 Centennial Boulevard
Liberal, KS 67901
Ph: +1 620 626 4350

Texas Office – Odessa
8007 East Business 20
Odessa, TX 79765
Ph: +1 432 272 1173

Texas Office – Houston
3700 West Sam Houston
Parkway South, Suite 600
Houston, TX 77042
Ph: +1 713 587 8000

Texas Office – Pleasanton
150 Eagle Ford Road
Pleasanton, TX 78064
Ph: +1 830 569 8062

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